

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-023169**Date Inspected:** 30-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhu Zhong Hai**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 12AE (FL3 to Bottom Plate)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Bottom Plate to FL3 Flange and Bottom Panel to Bottom Plate at Panel Points (PP) 110, PP 111 and PP 112 for Segment 12AE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00667 dated April 30, 2011.

The bolt sizes used were M24 x 60 RC Lot # DHGM240001 and the final torque value established was 633 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240013 and the final torque value established was 967 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240013 and the final torque value established was 540 N-m.

The bolt sizes used were M24 x 70 RC Lot # DHGM240119 and the final torque value established was 633 N-m.

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The Manual Torque wrench used was Serial No. XO2-777.

Note: At work point E4, PP 110; PP 111 and PP 112 bolts not installed at Sea Fastening interference locations.

Please reference the pictures attached for more comprehensive details.

BAY 11 – (Skid More Test)

This QA Inspector witnessed High Strength Bolt Testing for ASTM A325 Grade. Observed ZPMC QC Mr. Zhang Hai Jun (Bolting QC) performing bolts testing and ZPMC QC Inspector Mr. Lin Guang Guo (Testing Lab QC) generating report against the testing.

The testing of bolts was performed to determine

- 1.High Tension bolt capability (Proof Load).
- 2.Nut Rotation from Snug-Tight condition to Turn-of-Nut Pre-tensioning (Working Torque value at site).

Bolt assembly identified as ASTM A325 (High Strength Bolt), Bolt Assembly comprises of (a Bolt, a Nut and a Washer).

Bolt testing was performed on a Unit: Skidmore-Wilhelm; Model: HT; Serial Number: 1014 (Calibration Expiration due date on Aug 23, 2011) and Torque Wrench identified as XO-326 and Torque Wrench with Dial gauge on it is identified as XO-2(Calibration Expiration due date on Oct 03, 2011).

Three (3) bolt assemblies were tested per lot, after determining High Tension bolt capability (Proof Load) following Reports were generated by Mr. Ling Guang Guo.

Inspection Report # 119 for bolt size M24x170, RC Set# DHGM240119.

Five (5) bolt assemblies were tested per lot after determining Nut Rotation from Snug-Tight condition to Turn-of-Nut Pre-tensioning (Working Torque value at site) following Reports were generated by Mr. Zhang Hai Jun.

Inspection Report # 320 for bolt size M24x70, RC Set# DHGM240119, Torque value 427 N-m.

Inspection Report # 321 for bolt size M24x70, RC Set# DHGM240119, Torque value 680 N-m. (Note: The test was performed by rotating the bolt head and bolt nut was held stationery in skid more testing machine).

The generated reports were submitted to the Lead Inspector Mr. Mark Miller for review and disposition.

Please reference the pictures attached for more comprehensive details.

Traveler Rail at Paint Shop # 2

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This QA Inspector witnessed the final bolt tension verification on bolts connecting the Traveler Rail at Paint Shop # 2. The QA Inspector checked the gap between the faying surface of Angle piece which is installed at Traveler Rail web to the Traveler Rail flange by using 6" machinist ruler with 1mm thick and the results appeared to be in general compliance. The Inspection was performed against Inspection request of ZPMC QA Mr. Zhong Wei.

The following Traveler Rails were inspected in Paint Shop # 2 during the course of inspection Mr. Tian Lei (ZPMC QC) was available along with QA Inspector.

Traveler Rail # 11TR1-012

Traveler Rail # 11TR3-029

Traveler Rail # 11TR3-008

Traveler Rail # 10TR1-005

Traveler Rail # 10TR2-017

Traveler Rail # 10TR1-011

Traveler Rail # 11TR1-007

Traveler Rail # 10TR3-005

Traveler Rail # 11TR2-001

Traveler Rail # 10TR1-023

Traveler Rail # 11TR3-020

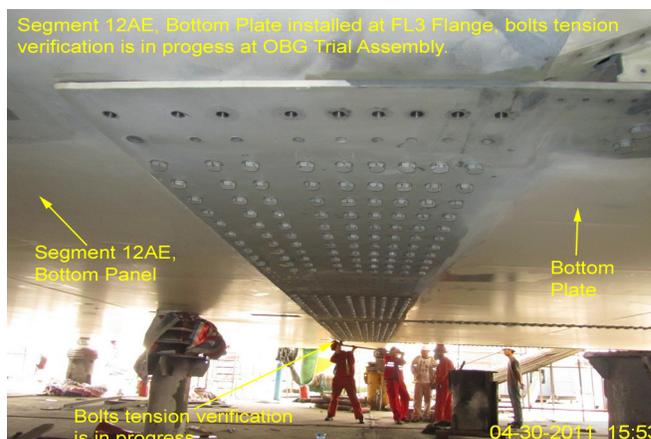
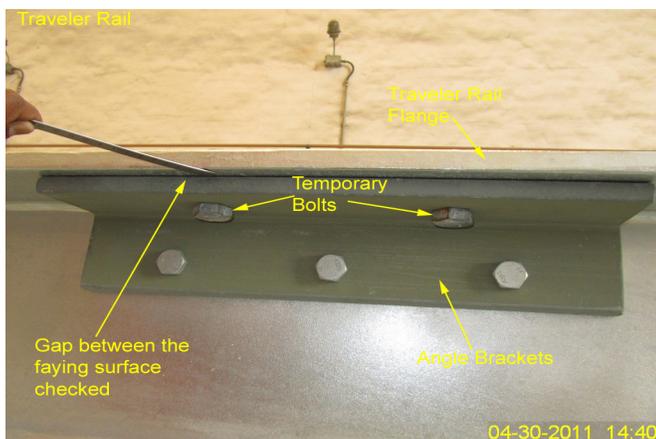
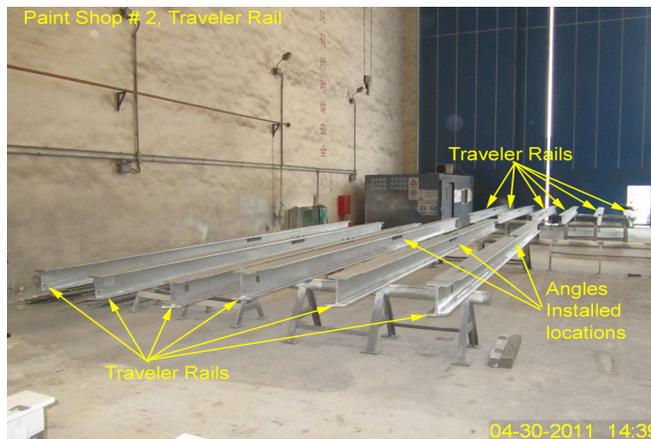
Traveler Rail # 10TR2-001

Please reference the pictures attached for more comprehensive details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By: Math,Manjunath

Quality Assurance Inspector

Reviewed By: Miller,Mark

QA Reviewer